Y

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,448	10/15/2003	In Su Jung	2950-0273P	8842

2292 7590 10/03/2006

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
LAMB, CHRISTOPHER RAY	
ART UNIT	**PAPER NUMBER**
2627	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/684,448	**Applicant(s)** JUNG ET AL.
	Examiner Christopher R. Lamb	**Art Unit** 2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.
  4a) Of the above claim(s) *11-15 and 24-28* is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-10 and 16-23* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *15 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☒ All b)☐ Some * c)☐ None of:
    1.☒ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species A in the reply filed on September 19th, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-10 and 16-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claimed subject matter in question is “based upon the reflection signal from the optical disc, determining whether or not the optical pick-up unit has moved to the beginning point of the optical disc while the optical disc is in motion.” This or similar language is present in all claims.

This subject matter appears to be described in the specification in paragraphs 29-32. There it states that the micromputer “checks a PI (Pull In Error) signal (or an AS signal) generated from the RF unit.” However, neither the PI signal or the AS signal are further defined or described; no circuit or description is given for how they are detected; and no explanation has been given for why this signal is lower in the innermost region, how much lower it gets, and how the comparison to the predetermined level is carried out. Thus one of ordinary skill in the art would be unable to make and/or use the invention without undue experimentation.

The following factors, among others, have been weighed by the Examiner in concluding that the claims do not satisfy the enablement requirement:

(A) The nature of the invention: the invention is directed toward eliminating the limit switch of a “convention DVD player,” and uses a reflected signal from the disc to do so. The Examiner has compared the application to prior art with the aim of eliminating said switch, also using a reflected signal from the disc to do so.

(B) That state of the prior art: the other prior art of record does not discuss a “PI signal” by that name; nor does it disclose that a reflected signal becomes lower at an innermost radius.

(C) The level of one of ordinary skill: one of ordinary skill in the art would certainly understand how to process a RF signal or focus signal – but would need to know what they are looking for and what to compare the signal to.

(D) The amount of direction provided by the inventor: that is, practically none. There are only a few paragraphs devoted to these crucial elements, and they do not go into specifics. Additionally, the signal is not depicted or shown in any figures.

(E) The existence of working examples: there are none.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 7, 9, 10, 16-18, and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Yano et al. (US 5,608,702).

Regarding claim 1:

Yano discloses:

A method for controlling movement of an optical pick-up unit, comprising the steps of:

a) performing a focus search operation on an optical disc and at the same time determining whether there is a reflection signal from the optical disc (column 5, lines 30-40);

b) after performing the focus search operation, moving the optical pick-up unit toward a predetermined beginning point of the optical disc based on the result of the determining step (column 5, lines 55-65); and

c) based on the reflection signal from the optical disc, determining whether or not the optical pick-up unit has moved to the beginning point of the optical disc while the optical pick-up unit is in motion (column 6, lines 20-60: Yano uses the reflection signal to calculate the current address, calculates the moving time, and then moves it based on that time, thus determining whether it has moved to the beginning while it is in motion).

Regarding claim 2:

Yano further comprises the step of:

d) if the optical pick-up unit has moved to the beginning point of the optical disc, performing a servo-tuning operation (inherent: Yano discloses that playback starts when it moves to the beginning in column 6, lines 55-56, and servo-tuning is necessary for playback).

Regarding claim 3:

In Yano the beginning point of the optical disc is an innermost data track of the optical disc (playback starts there, so it must be a data track).

Regarding claim 7:

In Yano, step (a) includes the steps of:

a1) performing a focus search operation at a beginning point of the optical pick-up unit in association with the optical disc when the optical disc is inserted into an optical disc apparatus, and at the same time determining whether there is a reflection signal from the optical disc (Fig. 3: step S4);

a2) moving the optical pick-up unit by a prescribed distance on the basis of the result of the step (a1) (Fig. 3: step S20); and

a3) performing a focus search operation for the optical disc at a position to which the optical pick-up unit moves, and at the same time redetermining whether there is a reflection signal from the optical disc (Fig. 3: step S21).

Regarding claim 9:

The method of Yano further comprises the step of:

(e) discriminating a type of the optical disc based on the reflection signal (Fig. 3: steps S18 or S22).

Regarding claim 10:

In the method of Yano the step (e) discriminates whether the optical disc is a 12cm-sized disc or an 8cm-sized disc (Fig. 3: steps S18 or S22, where the specific diameters are disclosed in column 4, line 60 to column 5, line 10).

Regarding claims 16-18 and 21-23:

Yano discloses a device for carrying out the method already discussed (Fig. 1). Otherwise these claims are similar to claims 1-3, 7, 9, and 10 and are similarly rejected.

7. Claims 1, 5, 6, 16, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishihara (US 6,449,222).

Regarding claim 1:

Ishihara discloses:

A method for controlling movement of an optical pick-up unit, comprising the steps of:

a) performing a focus search operation on an optical disc and at the same time determining whether there is a reflection signal from the optical disc (column 9, lines 20-25);

b) after performing the focus search operation, moving the optical pick-up unit toward a predetermined beginning point of the optical disc based on the result of the determining step (column 9, line 60 to column 10, line 60); and

c) based on the reflection signal from the optical disc, determining whether or not the optical pick-up unit has moved to the beginning point of the optical disc while the optical pick-up unit is in motion (column 10, lines 20-50).

Regarding claim 5:

In Ishihara the step (b) is executed when a focus drive signal is held (it is detecting the envelope of the RF signal: it must be holding the focus drive signal).

Regarding claim 6:

In Ishihara the step (c) determines whether the optical pick-up unit has moved to the beginning point of the optical disc on the basis of a PI (Pull In Error) signal created from the reflection signal of the optical disc (it uses the envelope of the RF signal: column 9, line 50-60: this appears to be the same as Applicant's PI signal).

Regarding claims 16 and 20:

Ishihara discloses a device (Fig. 3) for implementing the method. Otherwise these claims are similar to earlier claims and are similarly rejected.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 4 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yano in view of Ishihara.

Regarding claims 4 and 19:

Yano discloses a method and/or device as discussed above.

Yano does not disclose wherein the optical disc is a DVD (digital versatile disc).

Ishihara discloses a DVD (digital versatile disc) in column 1, lines 15-25. Ishihara discloses that it has more record capacity than a CD.

It would have been obvious to one of ordinary skill to modify Yano to include wherein the optical disc is a DVD.

The motivation would have been to expand Yano's device to also work with DVDs, increasing functionality, and increasing record capacity.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yano in view of Min

Yano discloses a method as discussed above.

Yano discloses wherein the step (a2) includes the step of:

a21) outputting a command for moving the optical pickup by a prescribed distance (column 6, lines 40-60).

Yano does not disclose wherein the step (a2) includes the steps of:

a21) at the same time setting up a target number, corresponding to the prescribed distance, of output pulses of a driver for moving the optical pick-up unit;

a22) moving the optical pick-up unit, and detecting a counted value of the driver's output pulses generated while the optical pick-up unit is in motion; and

a23) determining whether the optical pick-up unit has moved by the prescribed distance by comparing the counted value with the target value of the driver's output pulses.

Kunikata discloses a method of moving an optical pickup by a prescribed distance (Fig. 10) including the steps of setting up a target number, corresponding to the prescribed distance, of output pulses of a driver for moving the optical pick-up unit (Fig. 10), moving the optical pick-up unit, and detecting a counted value of the driver's output pulses generated while the optical pick-up unit is in motion (column 7, lines 55-65), and determining whether the optical pick-up unit has moved by the prescribed distance by comparing the counted value with the target value of the driver's output pulses (column 7, lines 55-65). Kunikata discloses that this provides for stable operation (column 3, lines 40-45).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Yano the steps taught by Kunikata.

The motivation would have been to provide for a stable moving operation.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito et al. (US 5,438,557), Aoyagi et al. (US 5,173,887), and Kadona (Us 5,974,013) all use an RF signal to find the beginning point of a disc; Okamoto et al. (US 5,696,744) discloses using a reflection signal to discriminate disc size.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (572) 272-5264. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 9/28/06

TAN DINH
PRIMARY EXAMINER
9/29/06